LG Low Voltage Power Center

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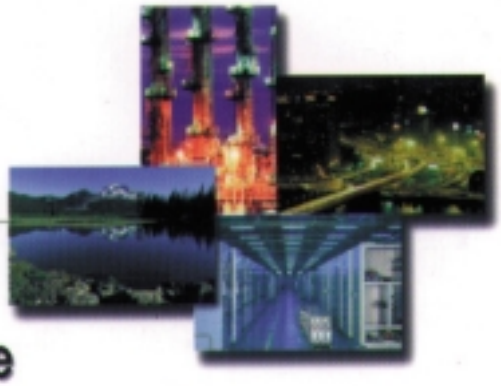
LG Industrial Systems



LG
Low Voltage
Power Center

Type : GL · GL-E,F

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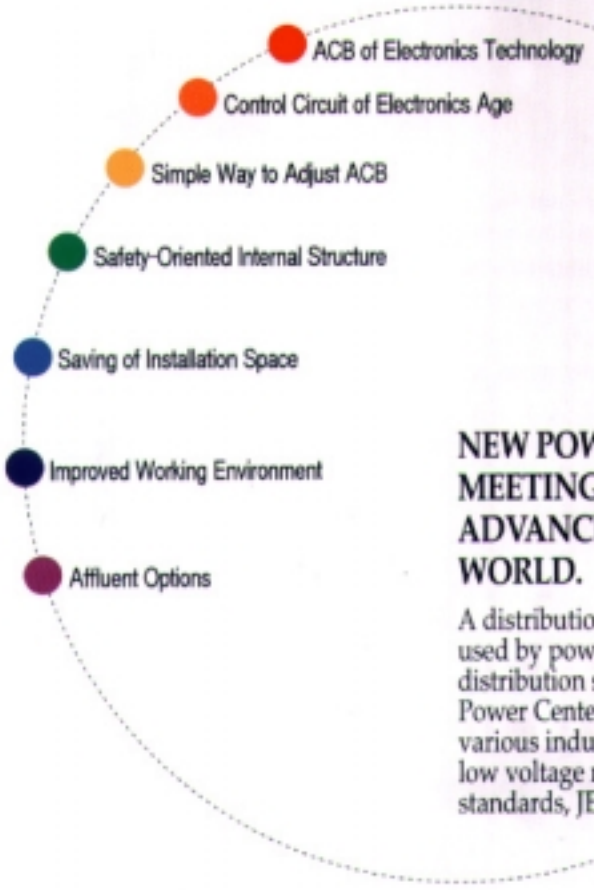


NEW POWER CENTER MEETING THE NEEDS OF ADVANCED TECHNOLOGICAL WORLD.

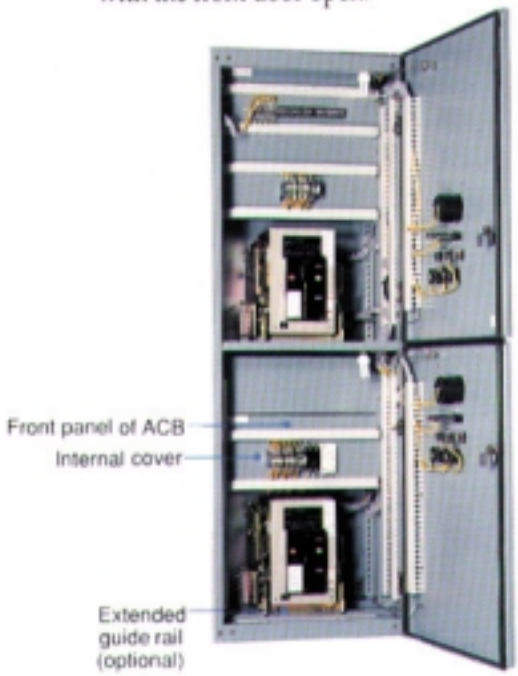
A distribution equipment of 600V or less used by power plants or water and power distribution system, LG' s GL Type Power Center can be applied to various industrial uses by adopting low voltage metal clad switchgear standards, JEM-1265 or IEC 158, 439.

Safe Internal Structure

The front panel of ACB and its inner protective cover ensure safe handling with the front door open.

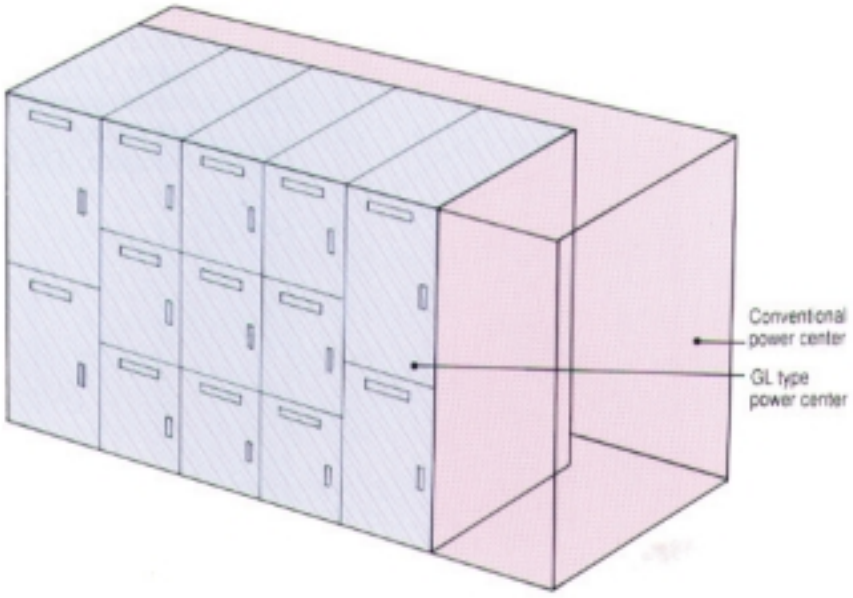
ACB of Electronics Technology

LG ACB contains protective, measuring, displaying and monitoring devices based on integrated electronics technologies, exhibiting high degree of reliability required by the system. Grouping of products into series also makes it easy to select desired ACB.



Saving of Installation Space

The product comes in compact size for effective use of electrical room. Also flexibility is provided for efficient use of available space.



Enclosure size

Circuit system	Type of receiving ACB	Rated current of ACB(A)	Available stacks	Standard casing size(mm) Width×Height×Depth
3 ϕ 3W	LBA-06	630	2	700(600)×2300×1200 600 is the minimum width
	LBA-10	1000		
	LBA-13	1250		
	LBA-16	1600		
	LBA-20	2000	2	700×2300×1200
	LBA-25	2500		
	LBA-32	3200		800×2300×1200
3 ϕ 4W	LBA-06	630	2	700×2300×1200
	LBA-10	1000		
	LBA-13	1250		
	LBA-16	1600		
	LBA-20	2000		800×2300×1200
	LBA-25	2500		
	LBA-32	3200		1000×2300×1200

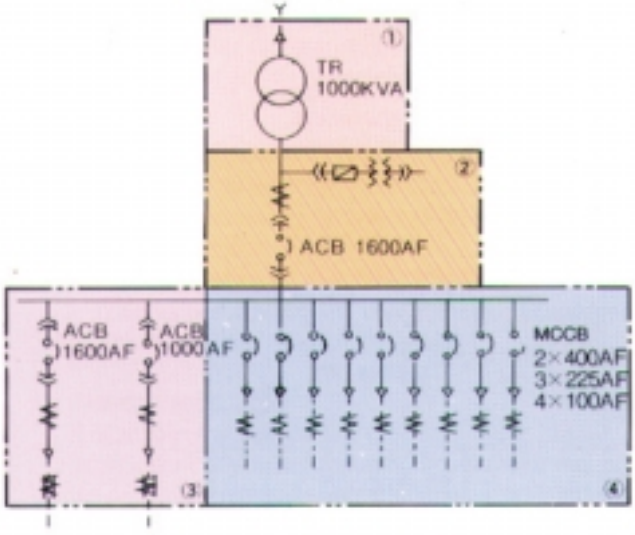
Note 1. In the cases of ambient temperature of 40℃ or higher, anti-vibration structure or setup of special board, conducting current may decline. Please contact LG in such cases.
2. Please consult LG when outgoing cable exceeds two strips of 325 mm² per phase.

Unit boards that can be lined up with space less series

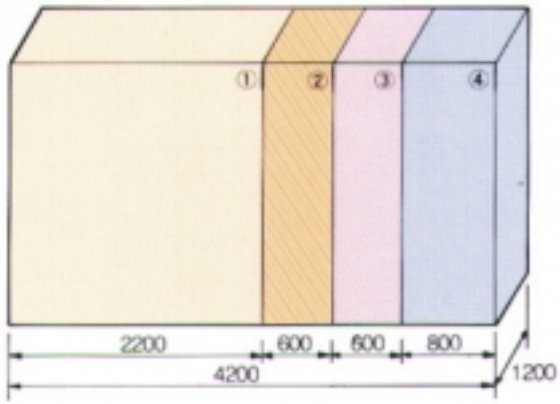
Type of unit board	Receiving equipment	Capacity	Standard casing size(mm) Width×Height×Depth
Transformer board	Dry type or Mold Tr.	1000 kVA max.	2200 max×2300×1200
MCCB	MCCB	50AF ~ 600AF	(600 ~ 1000)×2300×1200
Condenser board	Condenser+Series reactor	200 kVA max.	800 max×2300×1200

Example of System Application

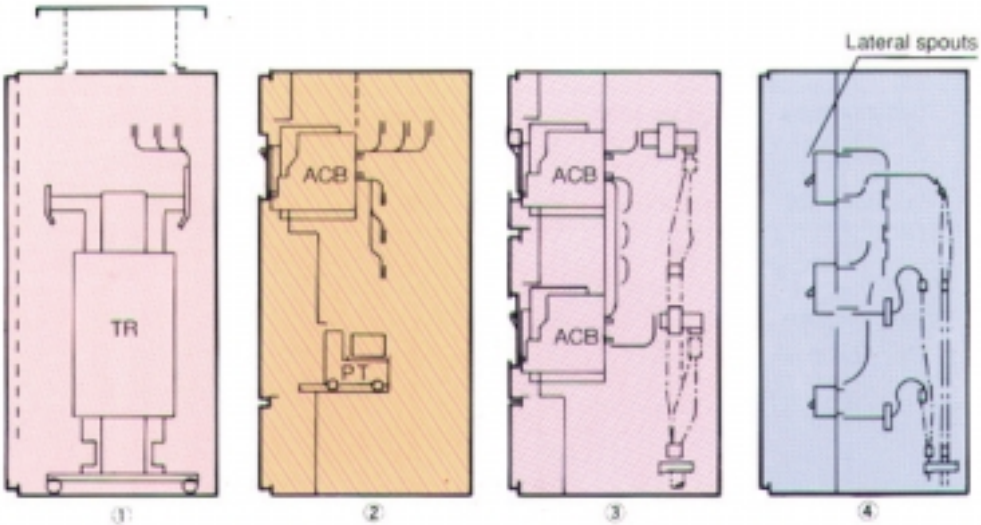
● Skeleton



● Board lay - out

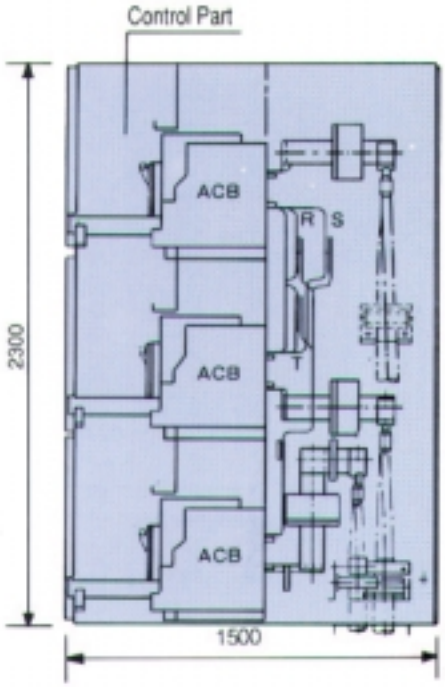


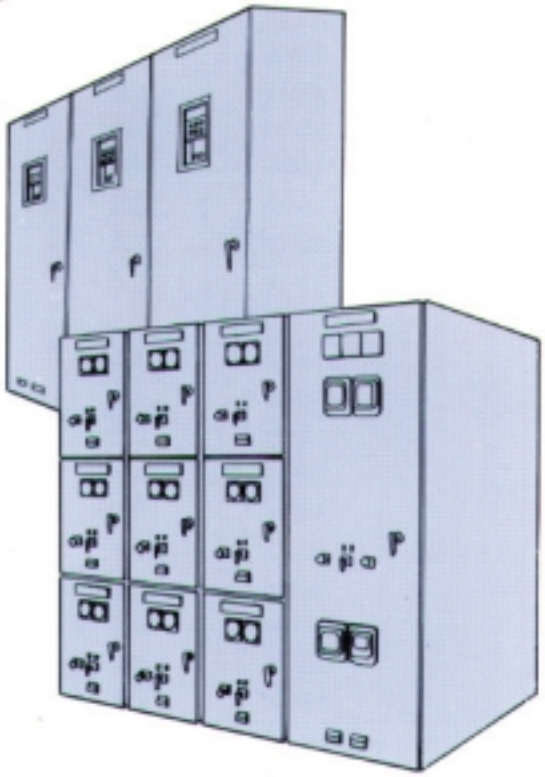
● Board Structure

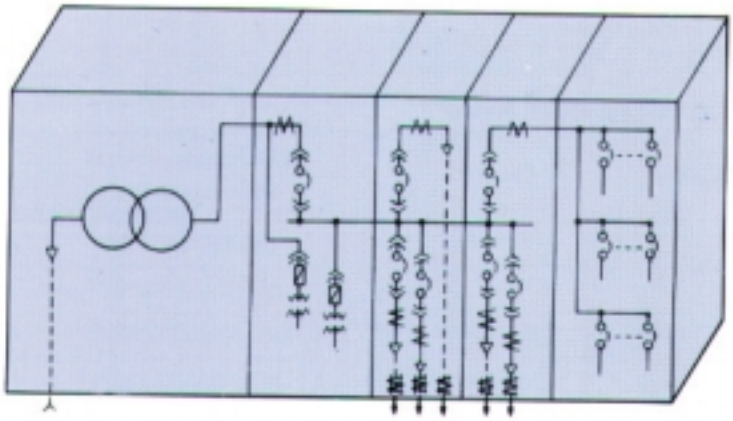


Adoption of 3 stacks

* Boards suitable for function and statistics are lined up.
* Lining up with Tr., MCCB boards, or high-voltage boards is possible.







Casing Size

Circuit system	Type of ACB	Rated current of ACB(A)	Possible stacks	Casing size(mm) Width × Height × Depth
3 ϕ 3W	LBA-06	630	3	700(600) × 2300 × 1200
	LBA-10	1000		
	LBA-13	1250		
	LBA-16	1600		
	LBA-20	2000		
	LBA-25	2500		
	LBA-32	3200	2	800 × 2300 × 1500
	LBA-40	4000	1	1000 × 2300 × 1800
	LBA-50	5000		
3 ϕ 4W	LBA-06	630	3	700 × 2300 × 1500
	LBA-10	1000		
	LBA-13	1250		
	LBA-16	1600		
	LBA-20	2000		900 × 2300 × 1500
	LBA-25	2500		
	LBA-32	3200	2	1000 × 2300 × 1500
	LBA-40	4000		1200 × 2300 × 1800
	LBA-50	5000		

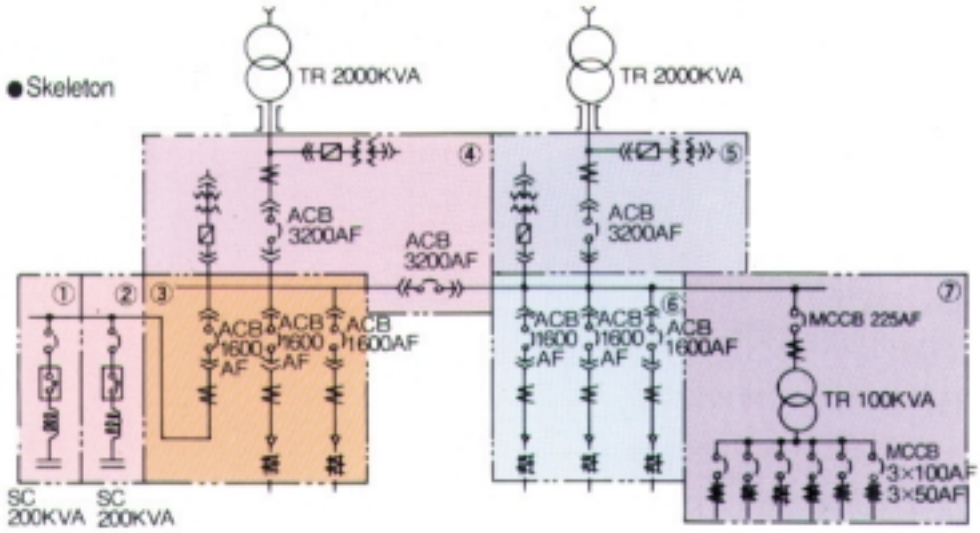
Note 1. In the cases of ambient temperature of 40° C or higher, anti-vibration structure or setup of special board, conducting current may decline. Please contact LG in such cases.
2. In the case of special structure specifications, the size of casing may vary. Please contact LG in such cases.
3. Please consult LG when the outgoing cable of feeder board exceeds 325 mm² × 2 strips per phase.

Unit boards that can be lined up with universal series

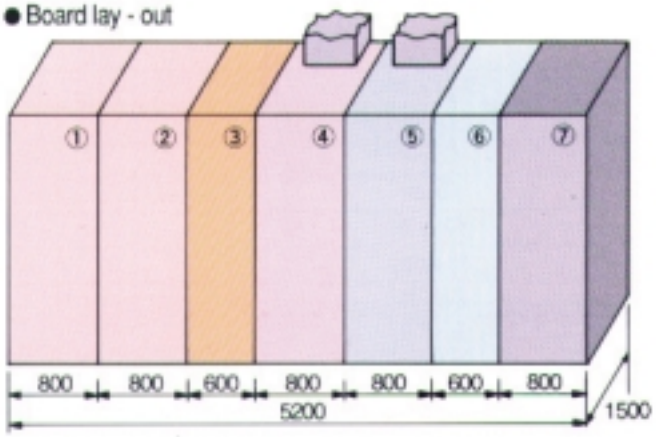
Type of unit board	Receiving equipment	Capacity	Standard casing size(mm) Width × Height × Depth
Transformer board	Dry type or Mold Tr.	1500 kVA max.	2400 max × 2300 × 1500
		2500 kVA max.	2800 max × 2500 × 1800
MCCB	MCCB	50AF ~ 1200AF	(600 ~ 1000) × 2300 × 1500
Condenser board	Condenser + Series reactor	400 kVA max.	1000 max × 2300 × 1500

Example of System Application

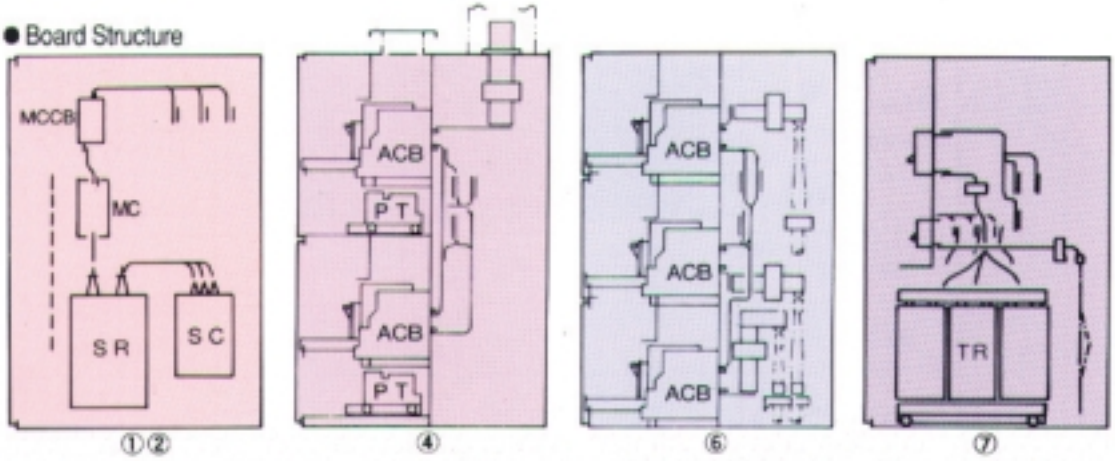
● Skeleton



● Board lay - out

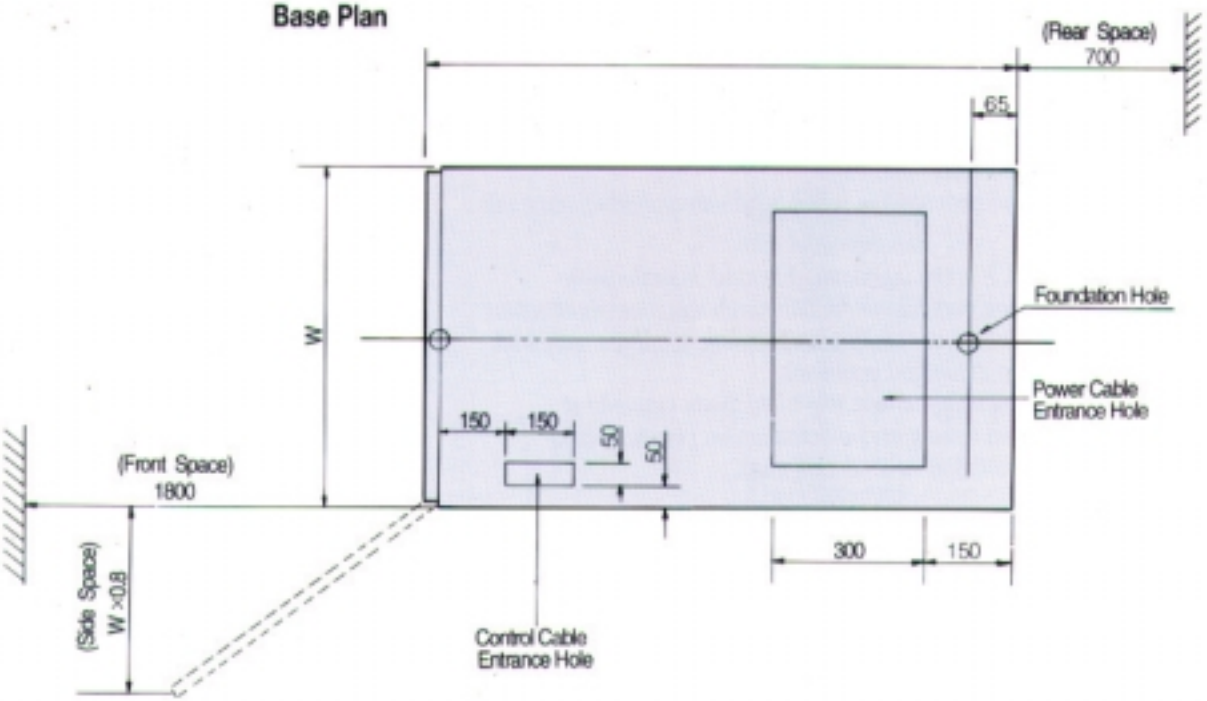


● Board Structure



Item	Subject			Standard spec.	Special spec.
General spec.	Applicable standards			JEM 1265 and IEC 439	
	Type of metal clad switchgear			JEM 1265 E-class	JEM 1265 F-class
	Environment of use			Max. elevation 1000: Temp. -5~40 C indoor	
Ratings	Rated voltage			AC 600V	
	Rated insulation voltage			AC 600V	
	Phase			3 Phase 3 Wires, 3 Phase 4 Wires	
	Rated bus current			600,1000,1200,1600,2000,2500,3200,4000,5000A	
	Rated frequency			60Hz	50Hz
	Control circuit voltage			DC 100 / 110V	
Casing	Thickness	Dool		2.3mm	3.2mm
		Side Plate		1.6mm	2.3mm
		Top & Buttom Plate		1.6mm	2.3mm
Painting	Outside inside of panel			5Y 7/1	Specified by customer
	Meter and relay			N 1.5	
	Material			Acrylic Resin	
Name plate	Color	Letters		Black (back ground carving)	Specified by customer
		Base color		Milk-White	
Ground	Burbar	Material		Copper	
		Size		3t × 25 mm	
		Location		Lower part	
Busbar	Material	Horizontal busbar		Copper	
		Vertical busbar		Copper	
		Wire		KIV or IV	
		Plating		Ag plating	
	Phase layout	AC	from left	R.S.T.N.	
			from up	R.S.T.N.	
			from front	R.S.T.N.	Specified by customer
		DC	from left	N.P.	
			from up	P.N.	
			from front	P.N.	
	Phase differentiation	AC	R phase	Red	Specified by customer
			S phase	White	
			T phase	Blue	
			N phase	Black	
		DC	P phase	Red	
			N phase	Blue	
Wire	Type	Control		KIV or IV	Specified by customer
		Main		KIV or IV	
	Size	Control		2.0mm²	
		Main		3.5mm²	
	Color	Control		Gray	Specified by customer
		Main		Black	
		Ground		Green	

Base Plan



Standard Ratings

Type			LBA-06	LBA-10	LBA-13	LBA-16	LBA-20	LBA-25	LBA-32	LBA-40	LBA-50	Remarks
Rated voltage (V)			650									
Frame (A)				1000	1250	1600	2000	2500	3200	4000	5000	
Conduction capacity of neutral polarity (A)			630	1000	1250	1600	1600			2500		
Rated frequency (Hz)			50 / 60									
			3, 4									
Rated breaking current (kA Symmetrical effective value)	KS JEC	AC550V	42/88.2	42/88.2	42/88.2	50/105	50/105	50/105	65/113	85/195.5	85/195.5	JIS standards
		AC460V	50/105	50/105	50/105	65/143	65/143	65/143	85/195.5	100/230	100/230	
Rated closing current (kA wave value)	IEC VDE	AC660V	30/63	30/63	30/63	42/88.2	42/88.2	42/88.2	50/105	65/143	65/143	
		AC500V	50/105	50/105	50/105	65/143	65/143	65/143	85/187	100/220	100/220	
Rated Short-time current (kA)			42			50			65	85		Conducting time 1 sec
Rated closing time (sec)			0.06							0.08		
Maximum full breaking time (sec)			0.04							0.05		
Weight (kg)	3 poles		80	80	81	81	103	104	123	210	210	Draw-out type Electro-charging type
	4 poles		93	93	94	94	116	117	136	210	240	

GL Type Power Center has a circuit breaker compartment in the front side, where removable ACB is installed, and a busbar and cable compartment in the rear side. Control circuit instruments are situated on the door and the front of the circuit breaker compartment.

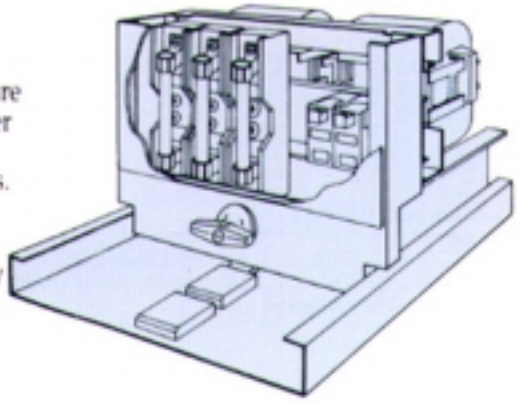
Circuit Breaker Compartment

Interlocks are provided as follows for safety during removal of ACB:

(1) While ACB is on, insertion/ removal is impossible.
(2) Turning-on and trip of ACB through electrical instruction are possible at connection and testing positions only (not permitted at neutral position).
(3) Manual turning-on and trip of ACB are possible at connection, testing and disconnection positions only (not permitted at neutral position).

Busbar and Cable

Located in the rear part of the board is the busbar compartment where horizontal busbar, a branch conductor to ACB and terminals connecting ACB with external parts are positioned. Connection to outside parts can be done by either cable or bus duct. The busbar compartment can be easily accessed by opening the rear cover for maintenance services.



Truck-mounted PT(Optional)

PTs are of removable type with both primary and secondary fuses attached to the truck. PT can be checked by drawing out the truck even while the main circuit is live.

Order of ACB removal

(1) Open the door of the circuit breaker compartment. Safety is ensured as the main circuit is isolated by the front panel of ACB and the internal cover.
(2) If ACB is on, push trip button of ACB to off position.

(3) Insert draw-out handle with the handle shutter at the inlet in upright position and turn the handle counterclockwise to draw-out ACB. "Connection" - "Testing" - "Disconnection"

(4) Remove control circuit connector at its disconnection position and turn the handle counterclockwise.

(5) Extended rail lock is automatically released at drawable position so the rail can be drawn out, enabling easy removal of ACB.

(6) After ACB is completely drawn out, use a lifter to move it.

CERTIFICATE

The TÜV CERT Certification Body of TÜV Rheinland Sicherheit und Umweltschutz GmbH

hereby certifies in accordance with TÜV CERT procedures that

LG Industrial Systems Co., Ltd.

#736, Osan-Dong, Osan-City, Gyeonggi-Do, Republic of Korea

has established and applies a quality system for

Design & Manufacturing of Electrical Power Distribution & Control Systems and Ultra-High Voltage Switchgear

An audit was performed.

Report No. **3284**

Proof has been furnished that the requirements according to

DIN EN ISO 9001

are fulfilled.

The certificate is valid until **October 1999**

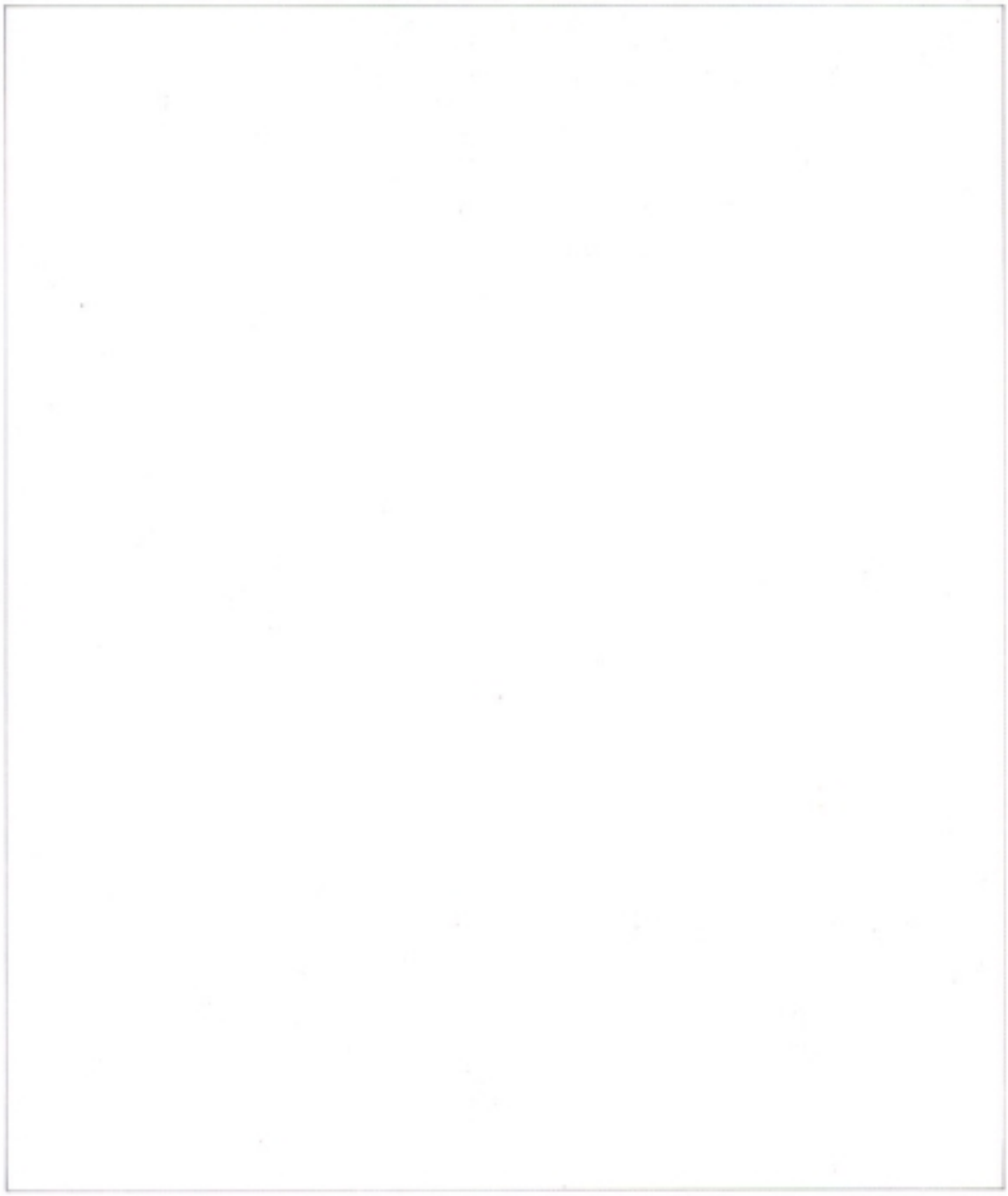
Certificate Registration No. **09 100 3284**

Cologne, 20.02.1997

TÜV Rheinland

TÜV CERT Certification Body of TÜV Rheinland Sicherheit und Umweltschutz GmbH

Memo



LG constantly endeavors to improve our products, so that information in this catalog is subject to change without notice.

LG Industrial Systems Co., Ltd.

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